

feels that the Bjerknesian scheme of the moving waves in the Polar Front is not conclusive.—C. L. M.

DISTRIBUTION OF ICE IN ARCTIC SEAS, 1922.

[Reprinted from *Nature*, London, Mar. 24, 1923, p. 411.]

The publication by the Danish Meteorological Institute of "The State of the Ice in the Arctic Seas, 1922" directs attention to a somewhat unusual year, but unfortunately information is almost entirely lacking from Siberian waters and very scanty from the Beaufort Sea. By April the extent of pack in the Barents Sea was much smaller than usual. Bear Island, which had been free from ice all winter, was clear, and open water almost reached to Nova Zembla. The edge of the ice continued to retreat. In July the whole west coast of Nova Zembla was clear, and in August Franz Josef Land was probably accessible by open sea.

Early in the year conditions in Spitzbergen were about normal. In May and early June an unusual amount of ice drove round the South Cape before continuous easterly winds, but this resulted in the west coast being practically free from ice for the remainder of the summer. On the north coast conditions were particularly favorable, and a vessel reached latitude $81^{\circ} 29' N.$ Some sealers circumnavigated Spitzbergen, a feat that is not possible in most years. In the Greenland Sea the belt of pack lay more westerly than usual, and though the east coast of Greenland does not appear to have been clear of ice, open water touched the coast in about latitude $74^{\circ} N.$ during August. Jan Mayen and the coast of Iceland were free from pack from May onward throughout the summer. On the Newfoundland Banks both pack and icebergs were abundant in early spring, but July was clearer than usual. In Davis Strait the winter ice was thinner and the "west ice" less abundant than usual. In Bering Strait conditions were fairly normal, but along the north coast of Alaska the pack pressed hard and navigation was much hindered.

PREDICTING DROUGHT IN EUROPE.¹

By F. EREDIA.

[Reprinted from *Science Abstracts*, March 25, 1923, p. 119.]

The author discusses the possibility of forecasting a period of drought some months in advance. Attempts in this direction have not hitherto led to a practical solution of the problem. The method generally adopted is to compare the values of certain meteorological elements, and by means of correlation to deduce from the numerical values of the relative coefficients the connection, intimate or otherwise, between the given elements. Thus some have admitted and others denied the relation between droughts and sunspots, the sun being considered as the primary determinant of all meteorological phenomena. More practical results may be achieved by examining the course of such meteorological elements as are characterized by stability, and of which it is possible to forecast the ulterior direction. Such an element is the barometric pressure.

From an examination of droughts in Italy it is clear that the characteristic barometric distribution is the persistence of anticyclonic areas in the Alpine and adjoining regions. Periods of high pressure coincide with dry periods. Extending our researches to the barometric conditions preceding droughts in the British Isles, it is found that persistent low pressure in the Arctic regions, and especially over Spitzbergen, points to the probable imminence of a dry period. In Italy, with persistent high pressure on the west coast of Europe, and especially on the French Atlantic seaboard, a shortage of rain is almost certain. We are thus led to consider droughts not as isolated phenomena, but as being intimately connected with the atmospheric circulation. The author concludes that we shall be better able to foresee the conditions favorable to the formation of dry periods the more extensive our knowledge of the meteorology of the northern regions, where profound modifications of barometric distribution are first revealed.—E. F.

¹ *Elettrotecnica*, November, 1922, 9: 746-748.

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RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Meteorologist in Charge of Library.

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

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Andrews, Walter.

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